

In re: Gerald H. Negley et al.  
Application Serial No.: 10/659,108  
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#### REMARKS

Applicants appreciate the continued thorough examination of the present application, and the new citation of U.S. Patent 6,480,389 to Shie et al. In response, Claim 3 now has been rewritten in independent form by incorporating the recitations of Claim 1 therein, and Claim 1 has been canceled. Claim 9 also has been amended to depend from Claim 3. Claim 15 has been amended for consistency with Claim 3. This Amendment raises no new issues. Applicants respectfully submit that independent Claims 1 and 15 are patentable over Shie et al., for the reasons that now will be described.

In particular, Claim 3 recites:

3. A mounting substrate for a semiconductor light emitting device comprising:  
a solid aluminum block including a cavity in a face thereof that is configured for mounting a semiconductor light emitting device therein; and  
a conformal insulating coating comprising aluminum oxide on a surface of the solid aluminum block, and in the cavity; and  
first and second spaced apart conductive traces on the conformal insulating coating in the cavity that are configured for connection to a semiconductor light emitting device. (Emphasis added.)

Moreover, remaining independent Claim 15 recites:

15. A light emitting device comprising:  
a solid aluminum block including a cavity in a face thereof and a conformal aluminum oxide coating on a surface thereof including in the cavity;  
first and second spaced apart conductive traces on the conformal aluminum oxide coating in the cavity;  
a semiconductor light emitting device that is mounted in the cavity and is connected to the first and second spaced apart conductive traces;  
a lens that extends across the cavity; and  
an encapsulant between the semiconductor light emitting device and the lens. (Emphasis added.)

Accordingly, both independent Claims 3 and 15 clearly recite that the conformal aluminum oxide coating is in the cavity and that the first and second spaced apart conductive traces are on the conformal aluminum oxide coating in the cavity.

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These structural recitations are not described in Shie et al. and, in fact, Shie et al. teaches away from these structural recitations. In particular, Shie et al. Column 3, lines 4-25 states:

Further, a layer of aluminum oxide (alumina) 14 functioned as an insulating layer is firstly formed on the upper surface and the outer surface of the wall 16, except on the inner surfaces of the cup-shaped portion 11, and then a layer of electrode material 15, preferably a light reflective metal such as silver, gold or aluminum, is deposited to cover the layer of alumina 14 and, in addition, to cover the inner surfaces of the cup-shaped portion 11.

In specific, the layer of electrode material 15 is formed on the layer of alumina 14 and on all of the inner surfaces of the cup-shaped portion 11. In this state, by means of an adequate processing, a portion of electrode material 15 covered on upper inner peripheral portion of the cup-shaped portion 11 and a portion of alumina 14 covered on the same are removed so as to separate the electrode material 15 into two parts, wherein the one part referred to as an electrode 15b, on all of the inner surfaces of the cup-shaped portion 11 is substantially connected to the metallic substrate 10, and the other part, referred to as an electrode 15a, on the alumina 14 functioned as the insulating layer between the electrode 15a and the metallic substrate 10 can be used as an independent external electrode of the metallic substrate 10.

(Emphasis added.)

This passage makes it clear that, in Shie et al., the aluminum oxide coating is not formed in the cavity, whereas Claims 3 and 15 clearly recite that the aluminum oxide coating is formed in the cavity. This passage also makes it clear that the first electrode 15b is formed in the cavity directly on the metallic substrate, whereas Claims 3 and 15 clearly recite that the first conductive trace is formed in the cavity on the conformal insulating coating. Finally, this passage also makes it clear that the second electrode 15a is formed on the aluminum oxide coating 14 outside the cavity, whereas Claims 3 and 15 clearly recite that the second conductive trace is also formed on the conformal insulating coating in the cavity. Accordingly, this passage of Shie et al., along with Figures 1-3 of Shie et al., teach away from many of the recitations of independent Claims 3 and 15.

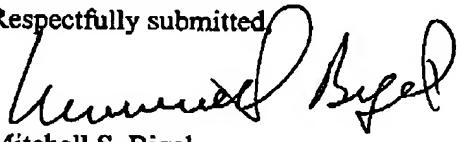
Applicants also submit that it would not be obvious to modify Shie et al. to provide the claimed invention in view of the clear teaching away in Shie et al. of the above-described recitations of Claims 3 and 15. Accordingly, independent Claims 3 and 15 are patentable over Shie et al. The remaining dependent claims are patentable

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at least per the patentability of the independent claims from which they depend. Applicants also respectfully submit that many of the dependent claims are separately patentable. However, in view of the clear patentability of the independent claims, and for the sake of brevity, this analysis will not be presented.

In conclusion, Applicants again appreciate the citation of Shie et al. However, Shie et al. teaches away from many recitations of the independent claims. Accordingly, Applicants respectfully request allowance of the present application and passing the application to issue.

Respectfully submitted,

  
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